REVIEWS

THE ANNUAL TABLE OF CONSTANT AND NUMERICAL DATA

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These annual tables are well known and the three present volumes, namely, the Numerical data on Rotatory Power by Prof. E. Darmois and those on Radio-activity, Nuclear Physics, Transmutation, Neutrons and Positrons by Joliot-Curie, B. Grinberg Wallen of the Institute De Radium and on Raman Effect by Dr. M. Magat of the College de France form a definite contribution for reference purposes.

The first one on rotatory power deals with data published during 1931-34 and is divided into five sections, namely, the specific rotatory powers of various groups of substances in the homogeneous states and in solution. In this section one finds hydrocarbons, fatty acids, sugar and its derivatives, amino-acids, polypeptides, diphenyl derivatives, terpenes, alkaloids and miscellaneous bases.

The second section is on the effect of temperature, concentration and solvent on rotatory power. Here one finds data regarding cellulose and starch as well as on vitamine D.

The third section deals with rotatory dispersions. Here one finds the new data of ascorbic acids, besides the data on various well known substances. The fourth section is on the revolution of racinic compounds and the fifth on muta-rotation.

The sixth section is about the effect of addition of esters, tartarates, sugars and other miscellaneous compounds.

The seventh section is about general theories such as Walden inversion, optical superposition, and asymmetric synthesis.

The second one on radio-activity and allied subjects comprises data from 1931 to April, 1936. Here one finds the section on radio active bodies, their half lives, α-rays, β-rays, γ-rays, radio-activity of potassium and of the rare earths, the heat evolved during radio-active transformation, chemical effects of radiations and the radio-activities of minerals and spring waters.

The third one on the Raman Effect is in continuation of a similar one published earlier in which data up to 1931 were included, and the present one deals with results published up to 1934. Though it is not up-to-date, it is very useful o research workers because it includes not only the Raman frequencies of the substances studied during the period from 1931 to 1934 but also gives the values of the factors of depolarisation of the lines wherever these values are available. The table is divided into three sections—Inorganic, Organic and the last section, which is theoretical, deals with different modes of vibration of polyatomic molecules and includes diagrams of such modes of vibration.